

INTERNATIONAL SEARCH REPORT

PTO

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 593	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, Item 5 below.</small>	
International application No. PCT/GB2004/003501	International filing date (day/month/year) 16/08/2004	(Earliest) Priority Date (day/month/year) 16/08/2003
Applicant coupler developments		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☐ Unity of invention is lacking (see Box III).

4. With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

METHOD AND APPARATUS FOR ADDING A TUBULAR TO DRILL STRING WITH DIVERTER

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 1

☐ as suggested by the applicant.

☒ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 E21B F16K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 298 385 A (GORDON JACKSON JOHN ET AL) 17 January 1967 (1967-01-17) column 1, line 66 - column 2, line 16; figures 1-4	1-5, 9-12, 14-33, 35, 37-41, 43-51, 53-55
Y	column 3, lines 42-47 column 4, line 57 - column 5, line 20	14
X	US 4 448 267 A (CRAWFORD GEORGE M ET AL) 15 May 1984 (1984-05-15) figures 14,15	1-3,9, 11,19, 20,23, 43-47, 50,53-55
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

4 January 2005

Date of mailing of the international search report

12/01/2005

Name and mailing address of the ISA

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Y	US 2 224 657 A (BLAND RODGERS SEYMOUR) 10 December 1940 (1940-12-10) figure 2	14
X	WO 03/025334 A (SHELL CANADA LTD ; VAN RIET EGBERT JAN (NL); SHELL INT RESEARCH (NL)) 27 March 2003 (2003-03-27) page 7, column 3	27
X	US 4 566 494 A (ROCHE JOSEPH R) 28 January 1986 (1986-01-28) the whole document	43
A	US 2002/134555 A1 (PIETRAS BERND ET AL) 26 September 2002 (2002-09-26) paragraphs '0065! - '0067!; figures 5,6	1,25,27, 39,40,43
A	US 4 646 844 A (ALEXANDER GABRIEL G ET AL) 3 March 1987 (1987-03-03) figures 1,2	1
A	US 6 230 824 B1 (TANGEDAHL MICHAEL J ET AL) 15 May 2001 (2001-05-15) the whole document	6-8

US 3298385	A	17-01-1967	NONE		
US 4448267	A	15-05-1984	NONE		
US 2224657	A	10-12-1940	NONE		
WO 03025334	A	27-03-2003	BR	0212412 A	03-08-2004
			CA	2460161 A1	27-03-2003
			EG	23211 A	31-07-2004
			WO	03025334 A1	27-03-2003
			EP	1432887 A1	30-06-2004
			US	2004231889 A1	25-11-2004
US 4566494	A	28-01-1986	AT	35844 T	15-08-1988
			BR	8404737 A	26-12-1984
			CA	1221603 A1	12-05-1987
			DE	3472819 D1	25-08-1988
			EP	0131618 A1	23-01-1985
			JP	2015718 B	12-04-1990
			JP	60500455 T	04-04-1985
			NO	843647 A ,B,	14-09-1984
			WO	8402949 A1	02-08-1984
US 2002134555	A1	26-09-2002	US	6412554 B1	02-07-2002
			US	2003221519 A1	04-12-2003
			US	2004154835 A1	12-08-2004
			AU	3763501 A	24-09-2001
			CA	2401075 A1	20-09-2001
			EP	1264069 A2	11-12-2002
			WO	0169034 A2	20-09-2001
			NO	20024130 A	25-10-2002
US 4646844	A	03-03-1987	AT	50022 T	15-02-1990
			BR	8507143 A	31-03-1987
			CA	1240921 A1	23-08-1988
			DE	3575764 D1	08-03-1990
			EP	0207136 A1	07-01-1987
			JP	6043794 B	08-06-1994
			JP	62501512 T	18-06-1987
			NO	863379 A ,B,	22-08-1986
			WO	8603798 A1	03-07-1986
US 6230824	B1	15-05-2001	AU	3366599 A	18-10-1999
			BR	9909171 A	13-11-2001
			CA	2326358 A1	30-09-1999
			DE	69921639 D1	09-12-2004
			EP	1071862 A1	31-01-2001
			WO	9949173 A1	30-09-1999
			AU	3105599 A	18-10-1999
			AU	3366499 A	18-10-1999
			BR	9909170 A	04-12-2001
			BR	9909172 A	13-11-2001
			CA	2326129 A1	30-09-1999
			CA	2326353 A1	07-10-1999
			DE	69919691 D1	30-09-2004
			EP	1075582 A2	14-02-2001
			EP	1082515 A1	14-03-2001
			NO	20004849 A	27-11-2000

US 6230824

B1

WO 9950524 A2

07-10-1999

WO 9949172 A1

30-09-1999

US 6325159 B1

04-12-2001

US 6102673 A

15-08-2000

US 2004007392 A1

15-01-2004

US 2002066596 A1

06-06-2002